

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018047**Date Inspected:** 17-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Chen xi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder(OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

BAY- 1

This QA Inspector Randomly observed the following work in progress:

Flux Cored Arc Welding (FCAW) Repair welding of weld joint 20TR2-034-009. Welder is identified as 215082. ZPMC Quality Control (QC) is identified as Mr. Ai wei. The welding variables appeared to comply with the Applicable WPS: WPS-345-FCAW-1G (1F) –Repair-1. The repair welding was being performed as per the Welding Repair Report (WRR) No: B-WR15432.This weld was rejected by ZPMC UT Technicians and recorded on UT report No: B787-UT- UT-15267.

FCAW Repair welding of weld joint 20TR2-042-009. Welder is identified as 215397. ZPMC Quality Control (QC) is identified as Mr. Ai wei. The welding variables appeared to comply with the Applicable WPS: WPS-345-FCAW-1G (1F) –Repair-1. The repair welding was being performed as per the Welding Repair Report (WRR) No: B-WR15164.This weld was rejected by ZPMC UT Technicians and recorded on UT report No: B787-UT- UT-15270.

WELDING INSPECTION REPORT

(Continued Page 2 of 4)

BAY- 2

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 06997.

Ultrasonic Testing (UT)

This QA performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated UT report for this date. The members are identified as OBG Steel Barrier weld Components. Total number of welds UT Tested: 2 No's. The weld designations are review as follows:

1. E5-SB1-013-081
2. E5-SB7-001-112

FCAW Repair welding of weld joint FB3343-001-016. Welder is identified as 045280. ZPMC Quality Control (QC) is identified as Mr. Zhu jun. The welding variables appeared to comply with the Applicable WPS: WPS-345-FCAW-2G (2F) –Repair-1. The repair welding was being performed as per the Welding Repair Report (WRR) No: B-WR16024. This weld was rejected by ZPMC UT Technicians and recorded on UT report No: B787-UT- UT-17123.

ZPMC personnel heat straightening OBG members are identified as FB3327-001 and FB3409-001. Distortion appeared to be caused by welding of the material. ZPMC Quality Control (QC) inspector identified as Mr. Zhu jun was present to monitor the heat straightening process. The heat straightening appeared to comply with Heat Straightening Report (HSR) HSR1 (B) 9638 and 9635 respectively. Additionally heat straightening was being performed after completion of Non Destructive Testing (NDT). This QA informed to ZPMC QC identified as Mr. Zhu jun and American Bridge/Fluor (AB/F) QA identified as Mr. Wang wen bin for this issue. Mr. Zhu jun and Mr. Wang wen bin informed this QA that after completion of HSR process ZPMC will re notify for NDT. The affected welds are identified as FB3327-001-001~021, 024~035, 047~069 and FB3409-001-001~021, 024~035, 037, 042~066. The Floor beam web plates are Designated as Seismic Performance Critical Material (SPCM). The Material thickness is 25 mm. Refer the attached photos for reference.

BAY- 3

FCAW of weld joint FB3286-001-281. Welder is identified as 052696. ZPMC Quality Control (QC) is identified as Mr. Zhan hai feng. The welding variables appeared to comply with the Applicable WPS: WPS-B-T-2233-TC-U5-F.

BAY- 7

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 06995.

WELDING INSPECTION REPORT

(Continued Page 3 of 4)

UT

This QA performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated UT report for this date. The members are identified as OBG Cross beam CB19 weld Components. Total number of welds UT Tested: 4 No's. The weld designations are review as follows:

1. X4253D-001-001
2. X4253D-002-001
3. X4253A-003-001
4. X4253A-004-001.

BAY- 12

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 06999.

UT

This QA performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated UT report for this date. The members are identified as OBG Lift14 weld Components. Total number of welds UT Tested: 18 No's. The weld designations are review as follows:

1. SA3114B-001-003,004
2. SA3114B-002-003,004
3. SA3114B-003-003,004
4. SA3114B-004-003,004
5. SA3111A-009-001,002
6. SA3111A-019-001,002
7. SA3111A-017-001,002
8. SA3111A-012-001,002
9. SA3051B-029-003,004.

Signed off the following green tag:

1. 15057.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

WELDING INSPECTION REPORT

(Continued Page 4 of 4)



Summary of Conversations:

Only general conversation was held between QA and Quality Control (QC) concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By: Prabhu,Surendra

Quality Assurance Inspector

Reviewed By: Hall,Steven

QA Reviewer